

Common Disorders of the Upper Limb

**Dr. Samira A. Satti, FRCS,Ire
Assist. Prof.
Orthopedic Surgeon
PNU 2016**

Disorders to be covered

- **Common Painful conditions**
- **Common Deformities**

Topics

Shoulder →

- Impingement syndrome
- Rotator cuff syndrome
- Frozen shoulder syndrome

Elbow →

- Tennis elbow (epicondalgia)
- Cubitus varus & valgus

Wrist →

CTS, De Quervain, Synovial ganglia

Hand →

Trigger finger, Mallet, Swan neck, Boutonnière
Claw hand, Volkmann's contracture

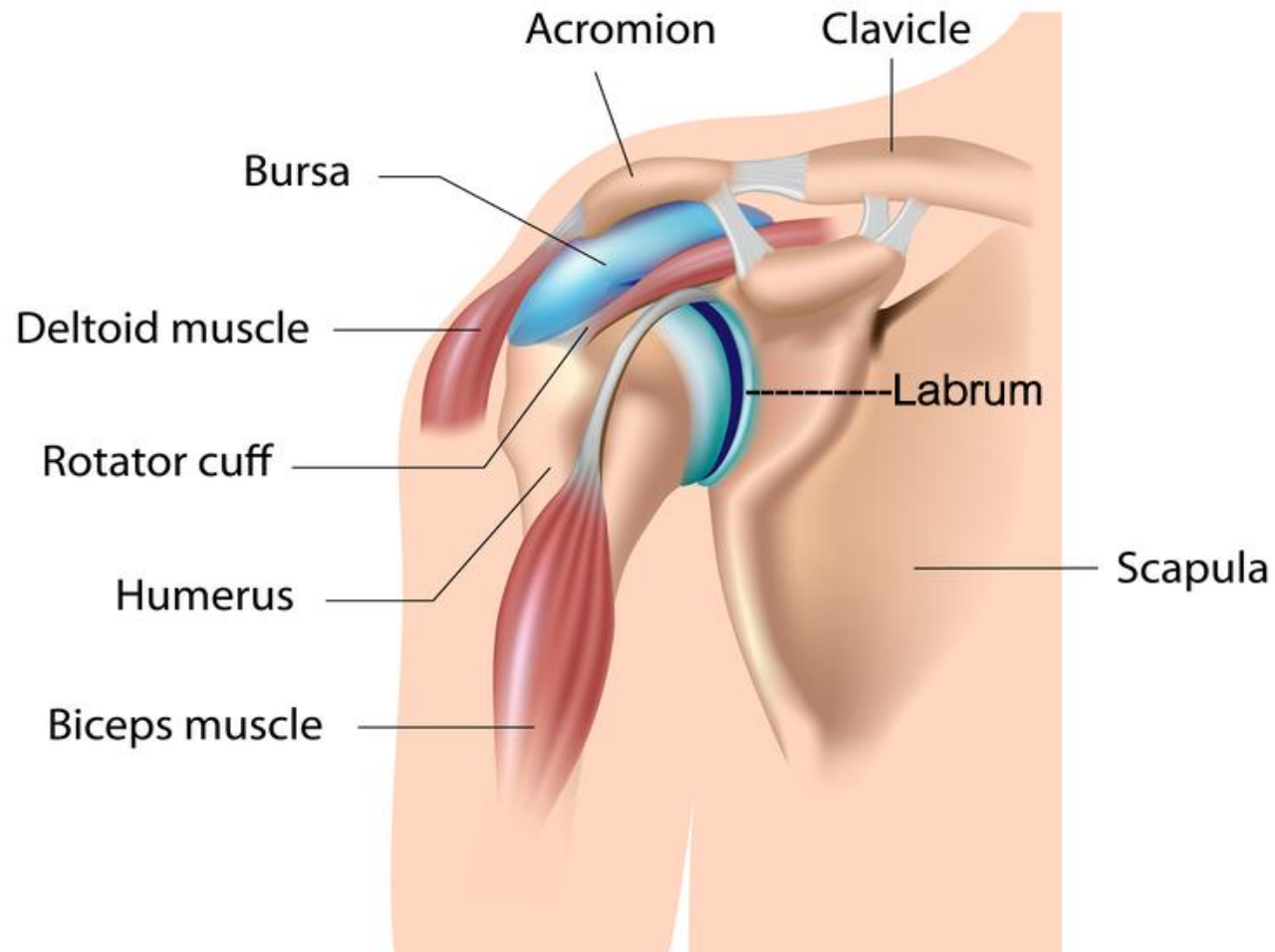
Shoulder

Painful conditions

- **Rotator Cuff** → Tendinitis, Rupture, Frozen shoulder
- **Instability** → Dislocation, Subluxation
- **Joints** → G.H & ACJ Arthropathy

(NB. Referred Pain)

Normal Shoulder



Rotator Cuff Syndrome

SITS; Coraco-acromial arch; Bursa; Biceps LH

- **Impingement** → (Mainly supraspinatus)
Painful abduction; **Painful arc**, 60_120 degrees
Repetitive friction; micro-hemorrhages; edema;
calcific **tendinitis**; Due to low-lying acromion;
other causes
- **Rupture** → Partial or complete resulting in, weak or, lack of
Abduction after initiation & upwards

Rotator Cuff

- **Symptoms & signs →**

Pain; Restriction of ROM; Tenderness;
(Special tests for specific tendons)

- **MRI**

- **Treatment**

Conservative → Pain management; PT

Surgical → Acromioplasty; Tendon repair

Frozen Shoulder

“Adhesive capsulitis”

- Progressive pain & stiffness
- **Resolves** spontaneously (~18 months)
- Histologically similar to Dupuytren’s disease
- Patient 40_60 y.o, with H/O Trauma
- **Pain** worse at **night**
- **Stiffness** complicates prolonged inflammation
- Restriction of **all ROM**
- D.D → RA, OA, infection, post-MI or CVA,etc
- MRI → R/O other pathology
(NB, XR normal)

Frozen Shoulder ttt

- **Conservative** → “Self-limiting”
- **Supportive** →
 - _ Pain management
 - _ Physiotherapy
 - _ Psychological
 - _ **Reassure** the patient about recovery
- **Surgical** →
 - MUA/Injection (methylprednisolone, lignocaine)
 - Arthroscopic capsular release

Instability

- Glenoid socket is shallow; Humeral head accommodated through Labrum glenoidale, Capsule and Ligaments.
- Failure of any of these, result in **Instability**

Definitions

- **Laxity** → Painless physiologic translation
- **Instability** → Abnormal motion causing pain, subluxation or dislocation
- **Subluxation** → Partial or incomplete separation
- **Dislocation** → Complete separation

Instability

Types:-

1. Traumatic (Bankart, Hill-Sachs)
2. Atraumatic structural
3. Atraumatic non-structural (muscle dyskinesia)

Diagnosis:-

1. Clinical presentation
2. MRI / Arthrogram /XR

Treatment:- Accordingly,

1. Surgical
2. Arthroscopic
3. Conservative

Osteo Arthritis (OA)

- **Joints** → Gleno-Humeral Joint
→ Acromio-Clavicular Joint
- **Causes** → Degenerative; Trauma; Inflammatory, etc
- **Presentation** → Painful restriction of ROM; Tenderness
- **XR** → Reduced joint space; Osteochondral changes
- **Treatment** → Analgesics; PT; Arthroplasty

Elbow

Painful →

- Tendinitis/ Epicondalgia
- Pulled Elbow
- Nerve entrapment
- Joints (arthropathies)
- Olecranon bursitis

Deformities →

- Cubitus varus
- Cubitus valgus
- Stiffness

Note → Instability

Painful

- **Tennis elbow** →

Repetitive trauma,(ECRL) micro-hemorrhages, inflammation, edema, calcifications.

O/E → Tenderness, painful ROM.

ttt → Conservatively by anti-inflammatory drugs & resting the joint + PT

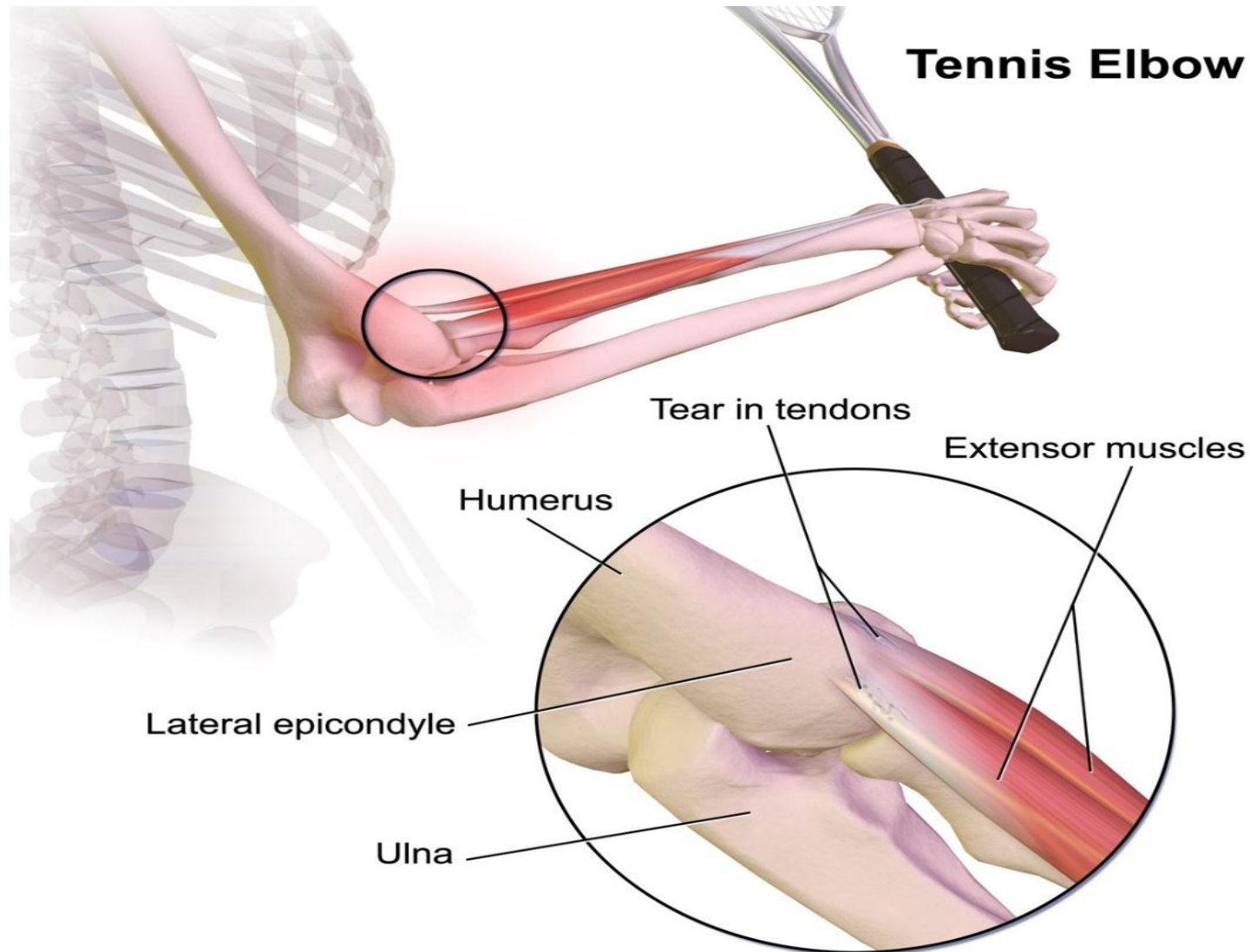
- **Nerve Entrapment** → Ulnar, Radial, Median. Pain, numbness, weakness. Treated by surgical release.

- **Arthropathy** → OA, Inflammatory, Infection

- **Olecranon Bursitis** → Painful swelling over olecranon

Note, Pulled Elbow → In children; Dislocation of Head Radius

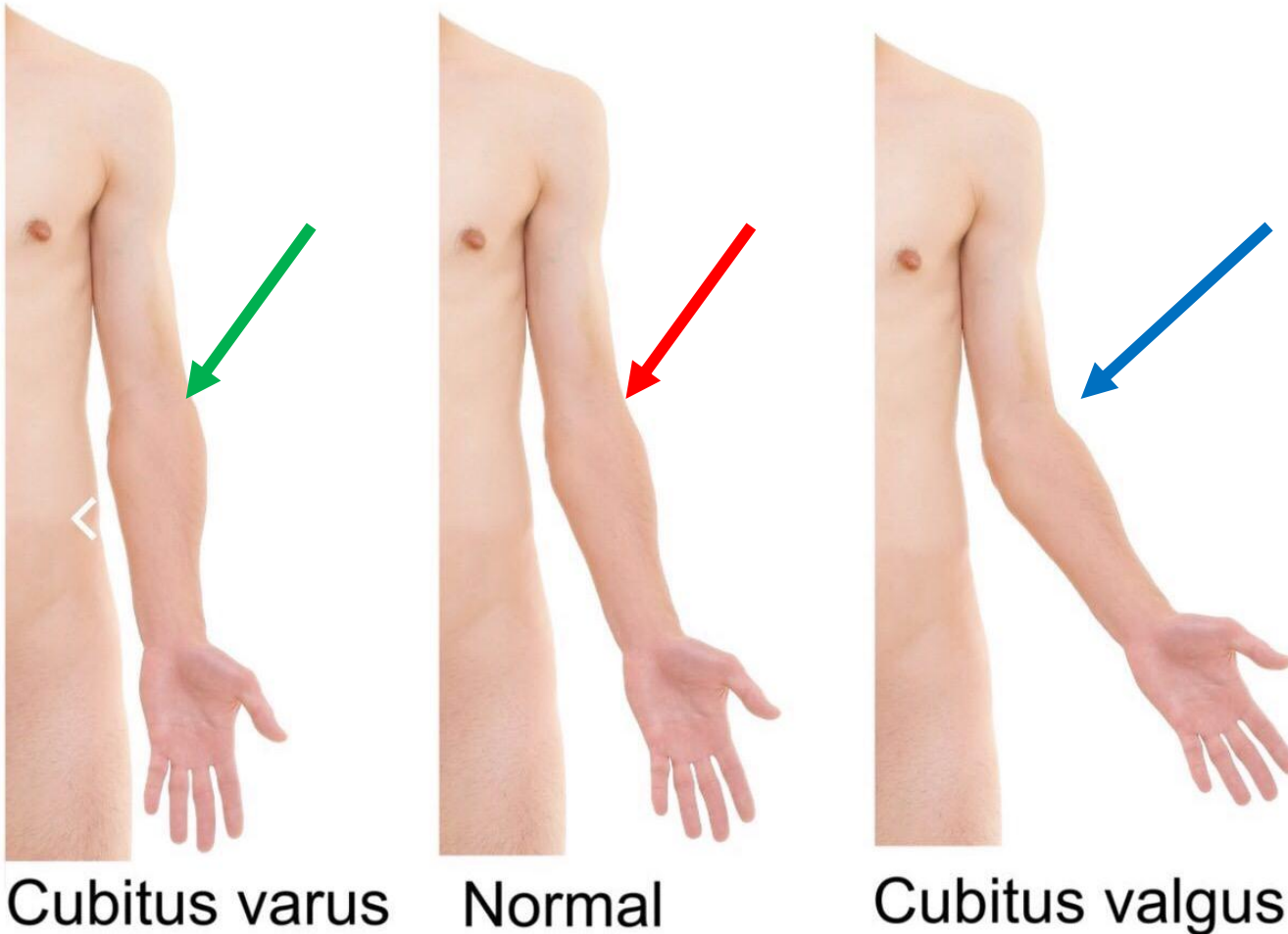
Epicondalgia



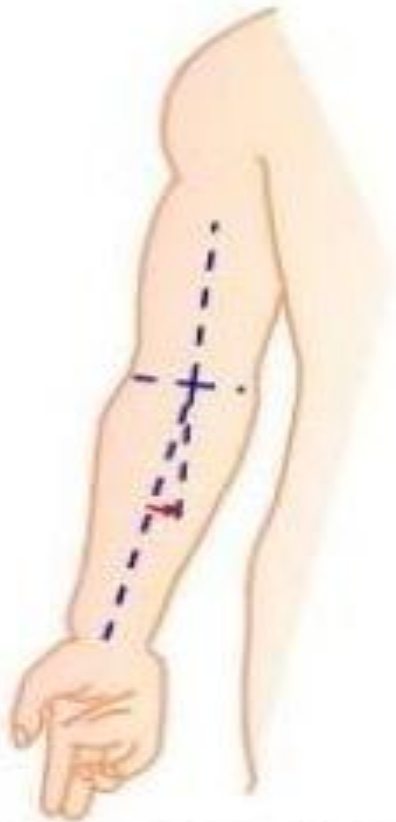
Deformities

- Normal elbow Carrying angle → **5_15 degrees**
- **Cubitus Valgus** → Usually post-traumatic, common in children with **# lateral condyle**; NB, Ulnar palsy tarda
- **Cubitus Varus** → Complicates **S/C #**
- **Stiffness** → Usually post-traumatic, sometimes associated with myositis ossificans

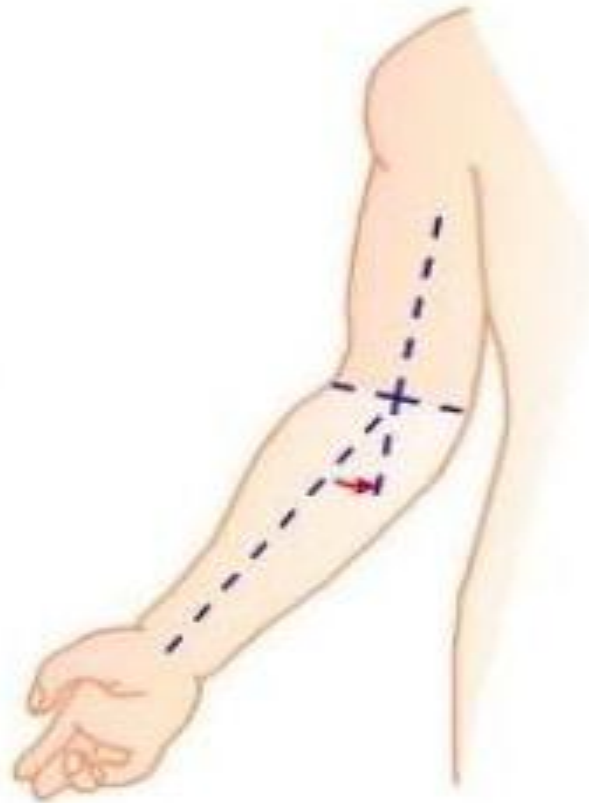
Elbow Carrying Angle



Elbow Carrying Angle



NORMAL



VALGUS



VARUS

Wrist

- Carpal Tunnel Syndrome
- De Quervain Tenosynovitis
- Synovial Ganglia

Wrist

CTS → Entrapment of **Median nerve** at the wrist

- Pain, numbness, weakness, wasting
- Diagnosed clinically & by NCS
- Treated by Median nerve release.

De Quervain → **Tenosynovitis of APL & EPB**

(due to overuse)

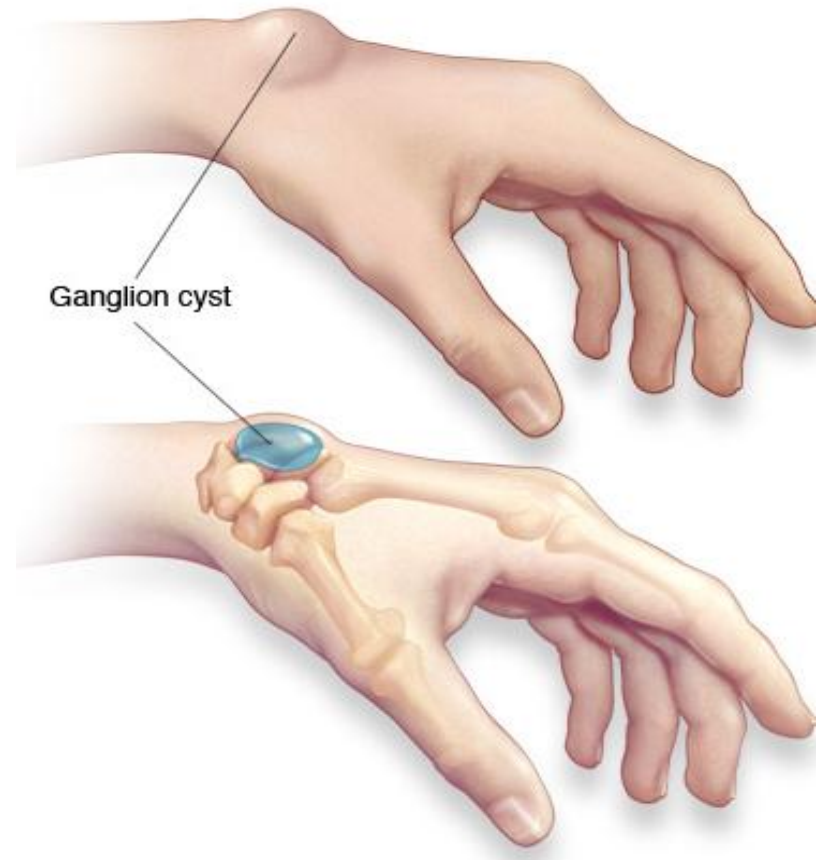
- Diagnosed **clinically**
- Treated by anti-inflammatory drugs
steroid injections or surgical release.

Synovial Ganglia

Accumulation of viscous synovial fluid within a tendon sheath or leakage out of a joint space; could be painful if pressing on a nerve

- **Tendon sheath** → Moves with the tendon; either disappears **Spontaneously** or by **Aspiration**
- **Joint** → Tends to **Recur** after aspiration; **Surgical** excision might be required

Synovial Ganglia



Hand

- Trigger thumb & fingers
- Mallet, swan neck & boutonnière deformities
- Volkmann's ischaemic contracture ; claw hand

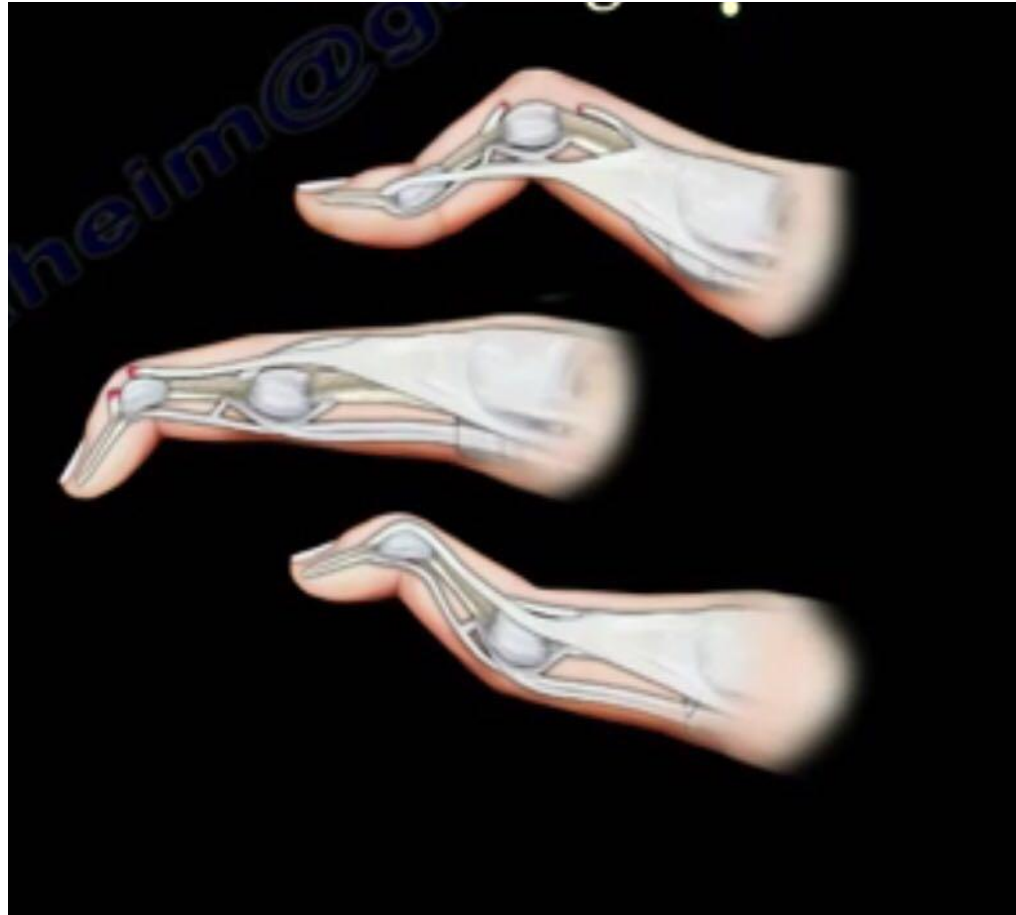
Trigger finger

- Triggering happens when a tendon is prevented from full extension by a fibrous thickening or nodule at a pulley point or fibrous thickening
- Forced extension causes a snap
- Common in diabetics and CT disorders
- Treated by → PT, steroid injections, or surgical release.

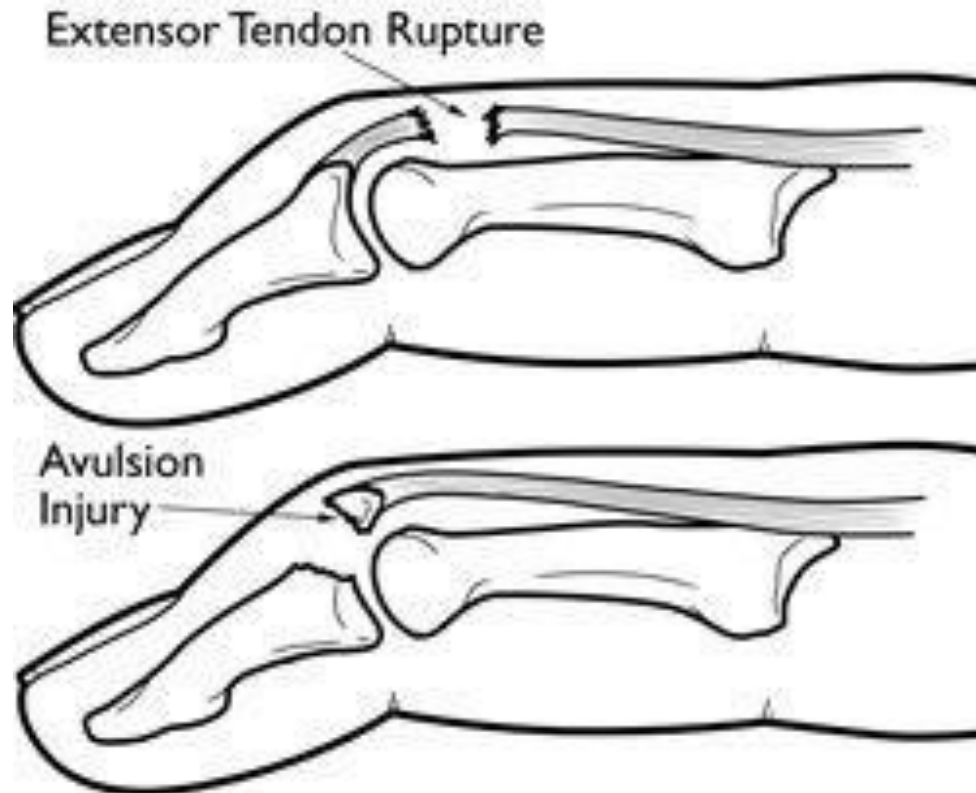
Finger deformities

- Mallet
- Swan neck
- Boutonniere

Boutonniere, Mallet, Swan-neck



Mallet Finger



Mallet splint



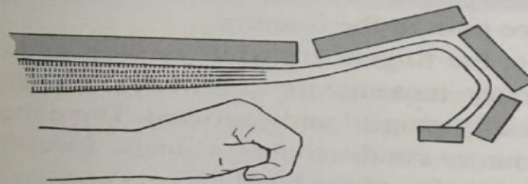
Volkmann's

- Flexion deformity of **the wrist & fingers**
- Due to **ischaemic** contracture of the **flexor muscles** of the forearm
- A consequence of ischaemic insult from vascular injury or compartment syndrome

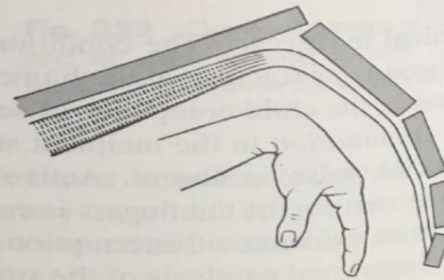
Volkmann's Ischemic Contracture



Fig. 224 Typical appearance of the hand in established Volkmann's ischaemic contracture.



225

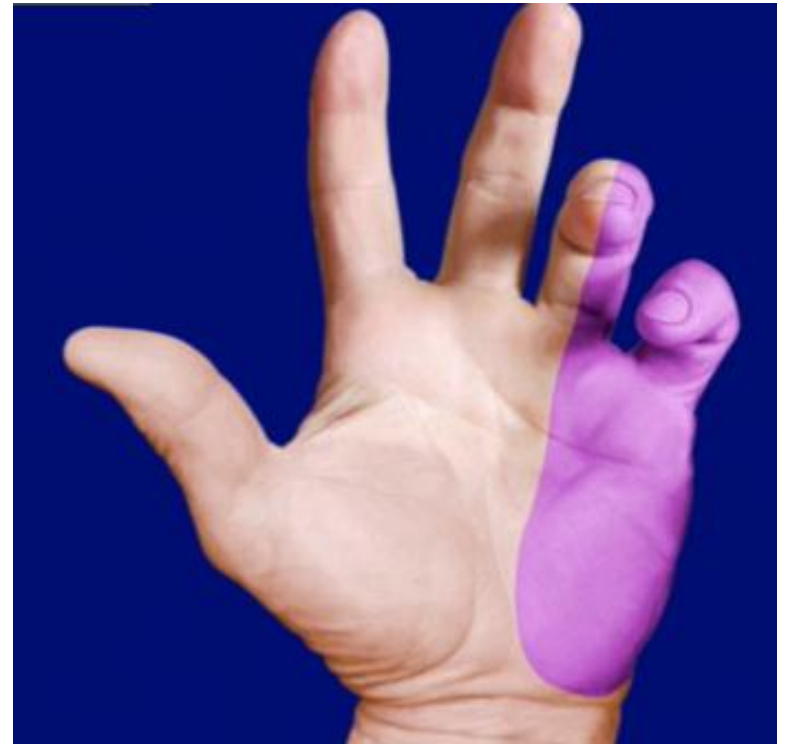
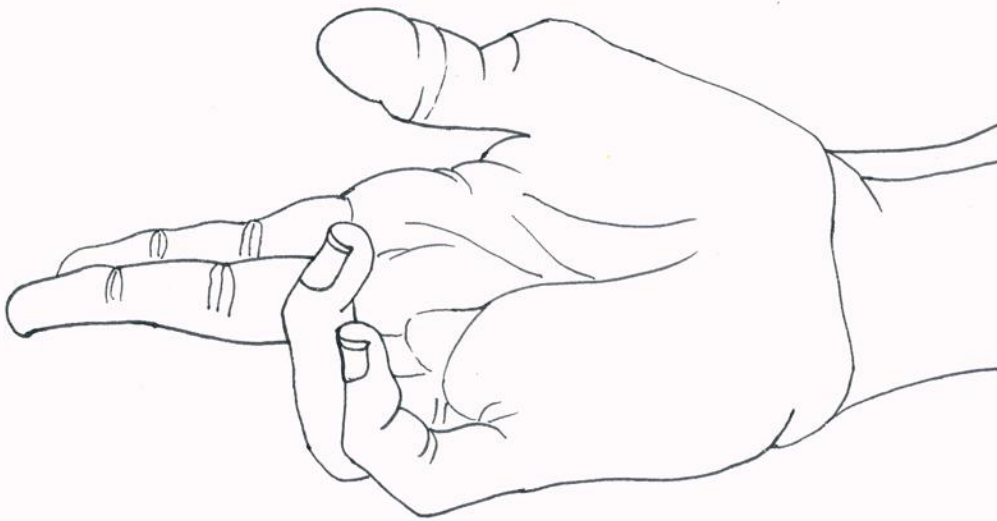


226

Figs 225 and 226 In Volkmann's contracture the wrist can be partly extended if the fingers are flexed (Fig. 225), and the fingers can be partly extended if the wrist is flexed (Fig. 226): but the shortened fibrotic flexor muscles prevent extension of wrist and fingers together.

Claw Hand

Ulnar Claw Hand



Le Fin

